AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A magnetic resonance imaging system comprising:

~~scanning~~exciting means for ~~selectively~~magnetically exciting ~~in turn~~a plurality of regions of an object, the plurality of regions being located within a predetermined imaging range provided by the magnetic resonance imaging system and a first region being excited at intervals a plurality of times while in the predetermined imaging range such that at least one other region is also excited during a period between said intervals, wherein the exciting means includes position-moving means for moving spatial positions of the plurality of excited regions synchronously with movement of the object;

acquiring means for acquiring echo data from the plurality of excited regions of the object while the object is continuously moved; and

processing means for producing image data from the echo data acquired by the scanning means;

~~wherein the scanning means includes position-moving means for moving the plurality of selectively excited regions according to a movement of the object such that the plurality of regions are selectively excited in sequence region by region within a predetermined imaging range.~~

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2. (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 1, wherein the imaging range is ~~determined fixedly in space~~spatially fixed and provided by the magnetic resonance imaging system.

3. (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 1, wherein the position-moving ~~scanning~~means includes a couch with a tabletop on which the object is laid, the couch having a mechanism for moving the tabletop in a longitudinal direction of the tabletop.

4. (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 1, wherein the plurality of regions ~~are composed of~~include multi-slices of the object.

5. (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 4, wherein a slice-selective axis ~~given to~~direction of the multi-slices ~~is made to agree with~~corresponds to a moving direction of the object on the couch.

6. (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 4, wherein a slice-selective axis ~~given to~~direction of the multi-slices is ~~made to be~~different from the moving direction of the object.

7. (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 4, wherein the ~~scanning~~exciting means includes means for adding another slice to a tail of the multi-slices as a slice belonging to the plurality of multi-slices in the moving direction in cases ~~where~~when a head slice of the multi-slices in the moving direction goes beyond the imaging range.

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8.   (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 4, wherein the position-moving means is configured to change slice by slice a carrier frequency of a selective-excitation RF pulse to be applied to the multi-slices.

9.   (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim ~~8~~6, wherein the position-moving means is configured to change the carrier frequency of the selective-excitation RF pulse in compliance with a geometrical relationship between the moving direction of the object and the slice selecting direction.

10.   (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 6, wherein the ~~scanning~~acquiring means ~~has acquisition means for acquiring~~is configured to acquire the echo data from the selectively excited slices, and

the processing means includes phase correcting means for correcting a phase of echo data acquired by the ~~acquisition~~acquiring means on the basis of a geometrical relationship between a position of the object and a direction in which a gradient is applied, and reconstructing means for reconstructing the echo data of which phases are corrected by the phase correcting means.

11.   (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 1, wherein the ~~scanning~~exciting means includes means for selectively exciting in sequence the plurality of regions by using a preparation pulse whose position applied to the object is moved in response to the movement of the plurality of regions.

12.   (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as in claim 1, wherein the ~~scanning~~exciting means includes means for selectively exciting in sequence the plurality of regions by use of a pulse sequence having a gradient pulse to be applied

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in the moving direction of the object, in which a phase compensation pulse for nulling a gradient

moment of a first or second order is added to at least part f the gradient pulse.

13.   (Currently Amended) ~~The~~A magnetic resonance imaging system ~~according to~~as

in claim 1, wherein the ~~scanning~~exciting means includes means for selectively exciting in

sequence the plurality of regions by use of a pulse sequence, formed based on a fast spin echo

technique, including a gradient that meets, at least partly a VIPS condition.

14.   (Currently Amended) A method for magnetic resonance imaging ~~that allows an~~

~~object to be imaged while the object is moved continuously~~, comprising~~the steps of~~:

moving an object continuously;

~~selectively~~exciting a plurality of regions of the object ~~in sequence region by region within~~

~~a predetermined imaging range~~ while the object is moved, the plurality regions being located

within a predetermined imaging range and a first region being excited at intervals a plurality of

times while in the predetermined imaging range such that at least one other region is also excited

during a period between said intervals, wherein spatial positions of the plurality of excited

regions are moved synchronously with movement of the object;

acquiring echo data from the plurality of excited regions of the object; and

~~moving positions of the plurality of regions selectively excited within the imaging range~~

~~in compliance with a movement of the object~~producing image data from the echo data.

15.   (Currently Amended) ~~The~~A magnetic resonance imaging method ~~according to~~as

in claim 14, wherein the imaging range is ~~determined fixedly at a spatial position~~spatially fixed

and provided by a magnetic resonance imaging system.

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16.   (Currently Amended) ~~The~~A magnetic resonance imaging method ~~according to~~as in claim 14, wherein the plurality of regions ~~are composed of~~include multi-slices of the object.

17.   (Currently Amended) ~~The~~A magnetic resonance imaging method ~~according to~~as in claim 16, wherein a slice-selective axis ~~given to~~direction of the multi-slices ~~is made to agree with~~corresponds to the moving direction of the object.

18.   (Currently Amended) ~~The~~A magnetic resonance imaging method ~~according to~~as in claim 16, wherein a slice-selective axis ~~given to~~direction of the multi-slices is ~~made to be~~ different from the moving direction of the object.

19.   (Currently Amended) ~~The~~A magnetic resonance imaging method ~~according to~~as in claim 16, wherein the exciting includes adding another slice ~~is added~~ to a tail of the multi-slices as a slice belonging to the plurality of multi-slices in the moving direction, in cases where a head slice of the multi-slices in the moving direction goes beyond the imaging range.

20.   (New) A magnetic resonance imaging system comprising:

a couch configured to move an object continuously;

a controller configured to excite a plurality of regions of the object while the object is moved, the plurality of regions being located within a predetermined imaging range and a first region being excited at intervals a plurality of times while in the predetermined imaging range such that at least one other region is also excited during a period between said intervals wherein spatial positions of the plurality of excited regions are moved synchronously with movement of the object;

a receiver configured to echo data from the plurality of excited regions of the object; and

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a reconstruction unit configured to produce image data from the echo data.

21.   (New) A magnetic resonance imaging system as in claim 20, wherein the imaging range is spatially fixed and provided by a magnetic resonance imaging system

22.   (New) A magnetic resonance imaging system as in claim 20, wherein the plurality of regions include multi-slices of the object.

23.   (New) A magnetic resonance imaging system as in claim 22, wherein a slice-selective axis direction of the multi-slices corresponds to the moving direction of the object.

24.   A magnetic resonance imaging system as in claim 22, wherein a slice-selective axis direction of the multi-slices is different from the moving direction of the object.

25.   (New) A magnetic resonance imaging system as in claim 22, wherein the exciting includes adding another slice to a tail of the multi-slices as a slice belonging to the plurality of multi-slices in the moving direction, in cases where a head slice of the multi-slices in the moving direction goes beyond the imaging range.

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